What is claimed is:

1. A method of manufacturing a color-converting filter, comprising:

forming color filter layers on a transparent substrate;

forming a colorant layer containing a color-converting colorant on said color filter layers; and

exposing said colorant layer through said transparent substrate and said color filter layers using colorant-decomposing light to form color-converting layers in positions corresponding to said color filter layers;

wherein said color-converting colorant is decomposed by light outside a wavelength region transmitted by said color filter layers;

said colorant-decomposing light contains a wavelength component that decomposes said color-converting colorant; and

said color-converting layers emit, through wavelength distribution conversion, light that will be transmitted by said color filter layers.

2. The method of manufacturing a color-converting filter according to claim 1, wherein said colorant-decomposing light is white light.

3. A method of manufacturing a color-converting filter, comprising:

forming color filter layers of n types on a transparent substrate;

forming a colorant layer containing color-converting colorants of n–1 types on said color filter layers of the n types; and

exposing said colorant layer through said transparent substrate and said color filter layers using colorant-decomposing light, to form color-converting layers of an m^{th} type in positions corresponding to said color filter layers of the m^{th} type;

wherein n represents an integer from 2 to 6, and m takes on the values of all integers from 1 to n–1;

each of the n types of said color filter layers transmits light in a different wavelength region;

the m^{th} type of said color-converting colorants is decomposed by light not transmitted by said color filter layers of the m^{th} type; and

said color-converting layers of the m^{th} type emit, through wavelength distribution conversion, light that will be transmitted by said color filter layers of the m^{th} type.

4. The method of manufacturing a color-converting filter according to claim 3, wherein said color filter layers of the $(m+1)^{th}$ type transmit light of a shorter wavelength than said color filter layers of the m^{th} type, and the m^{th} type of said color-converting colorants is decomposed by light of a shorter wavelength than the light transmitted by said color filter layers of the m^{th} type.

5. The method of manufacturing a color-converting filter according to claim 3, wherein said colorant-decomposing light contains wavelength components that together decompose all of the n–1 types of said color-converting colorants.

6. The method of manufacturing a color-converting filter according to claim 5, wherein said colorant-decomposing light is white light.

7. The method of manufacturing a color-converting filter according to claim 3, wherein exposure is carried out a plurality of times, and a wavelength

component that decomposes the m^{th} type of said color-converting colorants is contained in the colorant-decomposing light used in at least one of the plurality of exposures.

8. The method of manufacturing a color-converting filter according to claim 6, wherein exposure is carried out n–1 times, and the m^{th} exposure is carried out using light containing the wavelength component that decomposes the m^{th} type of said color-converting colorants.

9. The method of manufacturing a color-converting filter according to claim 3, wherein said colorant layer further contains an n^{th} type of color-converting colorant, color-converting layers of the n^{th} type are formed through exposure in positions corresponding to said color filter layers of the n^{th} type, the n^{th} type of said color-converting colorants is decomposed by light not transmitted by said color filter layers of the n^{th} type, and the n^{th} type of said color-converting colorants emits, through wavelength distribution conversion, light that will be transmitted by said color filter layers of the n^{th} type.

10. The method of manufacturing a color-converting filter according to claim 9, wherein said color filter layers of the $(m+1)^{th}$ type transmit light of a shorter wavelength than said color filter layers of the m^{th} type, the m^{th} type of said color-converting colorants is decomposed by light of a shorter wavelength than the light transmitted by said color filter layers of the m^{th} type, and the n^{th} type of said color-converting colorants is decomposed by light of a shorter wavelength than the light transmitted by said color filter layers of the n^{th} type.

11. The method of manufacturing a color-converting filter according to claim 10, wherein said colorant-decomposing light contains wavelength components that together decompose all of the n–1 types of said color-converting colorants.

12. The method of manufacturing a color-converting filter according to claim 11, wherein said colorant-decomposing light is white light containing a near ultraviolet component.

13. The method of manufacturing a color-converting filter according to claim 9, wherein exposure is carried out a plurality of times, and a wavelength component that decomposes the k^{th} type of said color-converting colorants is contained in the colorant-decomposing light used in at least one of the plurality of exposures, wherein k takes on the values of all integers from 1 to n.

14. The method of manufacturing a color-converting filter according to claim 13, wherein exposure is carried out n times, and the k^{th} exposure is carried out using light containing the wavelength component that decomposes the k^{th} type of said color-converting colorants.

15. The method of manufacturing a color-converting filter according to claim 4, wherein said colorant-decomposing light contains wavelength components that together decompose all of the n–1 types of said color-converting colorants.

16. The method of manufacturing a color-converting filter according to claim 4, wherein exposure is carried out a plurality of times, and a wavelength component that decomposes the m^{th} type of said color-converting colorants is contained in the colorant-decomposing light used in at least one of the plurality of exposures.

17. The method of manufacturing a color-converting filter according to claim 10, wherein exposure is carried out a plurality of times, and a wavelength component that decomposes the k^{th} type of said color-converting colorants is contained in the colorant-decomposing light used in at least one of the plurality of exposures, wherein k takes on the values of all integers from 1 to n.